Parental Tort Liability for Preimplantation Genetic Interventions: Technological Harms, the Social Model of Disability, and Questions of Identity

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I wrote Creating Children with Disabilities: Parental Tort Liability for Preimplantation Genetic Interventions' because I was puzzled by the dearth of literature on potential parental tort liability for preimplantation genetic interventions, and I wanted to spark an academic discussion on the topic. Therefore, I am extraordinarily pleased and honored that the Hastings Law Journal graciously agreed to publish and host a Symposium on this topic, and that Professors Glenn Cohen, Jaime King, and Alicia Ouellette were willing to engage in the discussion. Their thoughtful commentary has both challenged and advanced my proposal in numerous ways, and I am fortunate to have been aided by scholars who are both so wise and kind.

In the original article, I conclude that under current tort doctrine, parental tort liability is unlikely to result in a vast majority of cases because of Parfit’s Non-Identity Problem. But in certain cases, where

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parents intentionally engage in direct genetic interventions, such as gene modification, alteration, or deletion, for the purpose of producing a child with a disability, the resulting later-born child is harmed and should have a valid tort claim.

The debate over the possibility and wisdom of parental liability for preimplantation genetic interventions will hardly be settled here. To move the conversation forward, I will respond to several broad themes that appear in the responses: questions about whether parental tort liability is the best vehicle for solving problems of intentional diminishment, 7 concerns that the article fails to account for all of the costs (for example, the technological risks associated with assisted reproductive technologies (ARTs)) and benefits (for example, the benefits of growing up deaf in a deaf family) of being born with a disabling trait created by a preimplantation genetic intervention, and the possibility that the Non-Identity Problem precludes parental tort liability in all preimplantation situations. For each theme, I will respond directly to the commentary that most developed it. Like my commentators, I will focus on the claim that a parent should be liable to her child in tort where she intentionally engages in a direct preimplantation genetic intervention that creates a child with a disabling trait. For purposes of continuity, I will use the core illustration of deafness. 8

I. CALLS FOR REGULATION AND PROVIDER LIABILITY DO NOT SOLVE THE PROBLEM OF PARENTAL TORT LIABILITY

Professors King and Ouellette suggest that parental tort liability is not the best solution to the intentional creation of children with disabilities, instead calling for regulation of ARTs, or provider liability. 9 I did not mean to suggest in my article that regulation or provider liability suggests that children conceived and born as a result of negligence, for example a negligent tubal ligation that results in pregnancy, have no tort claim. As the child would not have existed but for the defendant's negligent act, he suffers no injury. Id. 7

While I use the term “intentional diminishment” in the original article, I do not define it. See Smolensky, supra note 1, at 308. Professor Cohen, however, adopts this term exclusively in his response and defines it as “intentionally using reproductive technology to produce a child who is on balance significantly harmed as compared to the ‘normal’ child (think of ‘diminishment’ as the antonymic concept to ‘enhancement,’ which is often discussed in the bioethics literature).” Cohen, supra note 3, at 349. While I agree substantially with his definition, he recognizes intentional diminishment to include preimplantation selection decisions. I would not. Instead, I would only use the term in reference to direct genetic interventions; only in these situations are capabilities associated with “normal” genes actually diminished.

8. Although many examples might be appropriate, I will use the example of a child who is deaf, both because it is the example used most frequently in the literature and because all of the responses have consistently referenced this example.

9. King, supra note 4, at 392-95 (arguing that regulation is the best solution); Ouellette, supra note 5, at 398 n.3 (suggesting that tort liability should lie with medical professionals and ART facilities); id. at 410 (hoping that “resulting policy,” which I take to mean regulation, “will protect children”).
was either impossible or undesirable. And I agree with Professors King and Ouellette that parental tort liability is not necessarily the best method, at least standing alone, for deterring ethically problematic preimplantation parental behavior. Yet, even if regulation and provider tort liability were widespread, questions about potential parental tort liability would likely still exist. Therefore, it makes sense for legal academia to consider these questions now.

There are certainly advantages (and disadvantages) to the regulation of ARTs, and others have written on this topic extensively. For purposes of the subject I have raised, however, I am relatively agnostic as to whether there should be regulation. Depending upon the way a particular statute is written it may expand, limit, or preclude tort liability. But in many cases, regulation will have little effect on the operation of tort cases. Therefore, while regulation aimed at preventing certain preimplantation genetic interventions is apt to reduce the number

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10. In fact, some countries have done just this. For example, the United Kingdom recently passed an amendment to the Human Fertilisation and Embryology Act of 1990, which prohibits the selection of pre-embryos with a disabling trait when nonaffected pre-embryos are available:

Persons or embryos that are known to have a gene, chromosome or mitochondrion abnormality involving a significant risk that a person with the abnormality will have or develop—

(a) a serious physical or mental disability,
(b) a serious illness, or
(c) any other serious medical condition,

must not be preferred to those that are not known to have such an abnormality.


11. Smolensky, supra note 1, at 306 n.39 (recognizing potential provider tort liability); id. at 311-12 (recognizing other scholarly proposals aimed at regulating parental behaviors). Most likely, the best solution is a combination of regulation and tort liability.


13. The Federal Employers’ Liability Act (“FELA”) can be viewed in this light. 42 U.S.C. §§ 51-60 (2006); DAN B. DOBBS, THE LAW OF TORTS § 133 (2000) (“By express terms or by implication, some statutes may create “a new claim or cause of action not recognized at common law.”

14. Statutes can limit tort liability by creating “new defenses to common law tort claims or enact[ing] a lower standard of care for some activities.” DOBBS, supra note 13, § 225.

15. Tort liability is generally only precluded where there is federal preemption. “A federal statute may set rules of conduct and create a federal remedy, administrative or otherwise, and at the same time preempt or exclude ordinary state tort law.” Id.

16. Id. (discussing the various ways that regulation can affect tort law).
of cases that a court hears, because of its deterrence effects, it probably will not completely eliminate all tort claims.  

Provider liability might also be preferable to parental tort liability. It targets those who control access to ART—the physicians, fertility clinics, and laboratories. And provider liability also has the ancillary benefit of providing a defendant with deeper pockets than his parents might have.

But provider liability also has its problems. Provider liability shifts the focus from parent to provider, and implicitly suggests that the moral actor in these preimplantation situations is the provider and not the parent. Given the current debate about the role of conscience in the practice of medicine, it is ironic that some might gladly make physicians liable in tort for providing ethically problematic services in the preimplantation context and yet expect physicians to provide other services to which the physician might have an ethical objection (for example, abortion services). Health care providers should either be moral agents or consumer-driven providers of health care, and it is unfair to expect them to act as moral agents in some situations but not others. Regardless of one’s feeling on this point, provider liability does not preclude parental tort liability given the widespread movement to comparative fault.

Of course, there may be situations in which provider liability is warranted. In arguing that my proposal is underinclusive, Professor King writes that “[h]arms derived from the embryo biopsy required to conduct PGS provide an argument for potential liability irrespective of Parfit’s Non-Identity Problem, as those embryos existed and could have been transferred without the removal of the cell for genetic testing.” I wanted to highlight this point because I think it is excellent; there is room for some form of tort liability here. In my mind, however, this potential liability is that of the physician and not the parents.

The technological risk of harm in ART procedures is similar to the risks that a patient accepts when she undergoes a medical procedure. The physician (or other health professional) performing the procedure has special knowledge about the risks associated with the procedure. Those risks must be communicated to the patient, and a physician’s failure to

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17. Given the relatively small number of preimplantation tort cases one might expect without regulation of ARTs, some readers may think that regulation will effectively eliminate any tort claims (i.e., that regulation is likely to push low numbers to zero). But, regulation is never 100% effective. One exception might be situations where a federal statute preempts state tort law. Id.


19. King, supra note 4, at 386.
give the patient appropriate information relevant to his decision to undergo a procedure does and should result in malpractice liability. Preimplantation interventions are no different. Tort law would not find a patient contributorily negligent for undergoing a medical procedure that his physician offered. Instead, if a known, serious risk manifested itself the patient would bear the burden of that harm. If a serious risk that the patient was not informed of manifested itself, the patient would have a claim in tort against his provider. While pre-embryos cannot give informed consent to medical procedures, this fact does not negate the provider's duty to inform parents of the technological risks associated with the relevant procedures. Further, I am not aware of any cases where children have successfully sued their parents for giving consent to a medical procedure performed by a medical provider. For these reasons, provider liability may lie where physicians and other medical providers fail to provide appropriate information to the parents about the risks associated with ARTs.

II. DETERMINING HARM: BALANCING ALL OF THE RELEVANT COSTS AND BENEFITS

All three commentators suggest that my article does not fully account for all of the benefits (for example, the benefits of growing up deaf in a deaf family) and perhaps all of the costs (for example, the risks of technological harm created by ART procedures associated with preimplantation genetic interventions. I address the latter of these concerns first.

A. THE COSTS ASSOCIATED WITH THE RISK OF TECHNOLOGICAL HARM

My article implicitly disregards any risk of technological harm from the use of ART techniques. As Professor King notes, there is limited information about the scope and severity of these technological risks, but it is probably true that not all ART techniques are harmless. It is

20. Informed consent cases are sometimes brought as battery claims, for example, where “the operation performed was different from the one to which the patient consented.” Dobbs, supra note 13, § 225. But in instances where the patient receives inadequate information, they are brought as negligence claims. Id.
21. Id.
22. Cohen, supra note 3, at 349; King, supra note 4, at 388; Ouellette, supra note 5, at 401.
23. King, supra note 4, at 383-84 (detailing the risks associated with high-order multiple embryo transfers and pregnancies, pre-embryo biopsy, and “gene therapy”). I prefer the term “genetic engineering” to “gene therapy” because gene therapy implies the use of a gene addition, alteration, or deletion that improves substandard physiological functioning to a level considered “normal” for the human species. Genetic engineering could be used to create genetic enhancements (for example, increased intelligence, strength, or athletic abilities beyond that considered “normal”), therapeutic functioning (such as that sought after in gene therapy), or intentional diminishments (for example, deafness, blindness, or mental capacity below that considered “normal”).
24. Id. at 383.
probably also true that some ART techniques may be quite harmful. Discussing indirect genetic interventions, King argues that “[t]he known and unknown risks of embryo biopsy should be weighed against the benefit of being able to select between embryos. In cases of selecting for an embryo with a disabling trait, establishing a benefit significant enough to outweigh the risk of the procedure will be difficult.”

She makes similar arguments in the context of direct genetic interventions, arguing that “courts should consider the medical risks of undertaking the procedures” as doing so “broadens the scope of parental tort liability for preimplantation interventions.”

It seems to me that a large portion of her concern is about the limits of procreative liberty, and not the appropriate calculation of embryonic harm. If this is true, then I agree that when deciding whether parents’ should be able to select for or modify any genetic trait, we must consider, among other things, the benefits of having that choice against the risks to any resulting offspring. The technological risks of ART may very well limit preimplantation genetic interventions for any purpose, and such an analysis is vital to determining the limits of procreative liberty.

Professor King may also be suggesting that given the potential technological harms from preimplantation genetic interventions, fewer kinds of selections or modifications (perhaps only those that are therapeutic or enhancing) should be allowed. The corollary to this argument is that the more borderline cases under my proposal should be considered harmful if you take into account the risk of technological harm; therefore, my proposal is underinclusive. While it is true that considering the risk of technological harms may shift the line between harm and benefit in any particular, real-life case, considering the risks of technological harm is unnecessary when comparing particular selections or modifications in relative terms. This is because the risk from technological harm cancels out.

The technological risks associated with in vitro fertilization (IVF) and preimplantation genetic diagnosis and screening (PGD and PGS) are no different for the later-born child if parents are selecting pre-embryos based on the presence or absence of a particular gene. Regardless of whether a parent is selecting for or against a particular gene, all eggs and pre-embryos undergo the same IVF procedures, and all pre-embryos are

25. Id. at 386.
26. Id. at 387.
27. The technological risk to the later-born child is the risk associated with the embryo biopsy. Once the embryo is biopsied it can be tested for the presence or absence of any particular gene. This genetic testing affects only the removed cell, and not the rest of the embryo. Hence, the risk associated with the biopsy in both cases is the same.
biopsied. All later-born children, therefore, face the same risk of technological harm.

The same may also be true of direct genetic modifications, but it is difficult to say since the technology does not yet exist. It may be that adding a gene creates more risks for the later-born child than deleting a gene. Or, it may be that adding gene A creates more risks than adding gene B. We simply do not know. Therefore, I assumed that the risk of technological harm to the later-born child remained constant in these situations as well. Of course, it very well may be the case that the technological risks associated with direct genetic interventions are significant enough that all direct genetic interventions, regardless of whether they are therapeutic, enhancing, or diminishing, should be prohibited.

While I think the risk of technological harms generally cancels out when comparing decisions involving similar genetic interventions, Professor King is right that there may be situations where the technological risks make a difference. For example, the technological risks may make a difference where parents could conceive naturally and yet choose IVF and genetic manipulation solely because they wish to create a child with a disability. In these instances, the technological risks may not cancel out, but rather add to any harm associated with the disabling genetic trait. Conversely, technological risks may reduce the perceived benefits of selecting for or creating "normal" or enhancing traits.

B. THE BENEFITS OF GROWING UP DEAF IN A DEAF FAMILY

All of the commentators note the potential benefits of growing up deaf in a deaf family. So did many of my colleagues in commenting on earlier drafts of the original article. Yet, I am particularly indebted to Professor Ouellette for her clear discussion of the social model of disability, and her well-articulated concern that the article "employs a medical model of disability in which a child born with deafness or deafness..."

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28. It is true that some eggs or sperm may be retrieved and stored using different techniques and protocols. It is also true that some conceptuses may be cultured in different media or that some pre-embryos may be biopsied in slightly different ways, etc. Some of these techniques may be more harmful than others. But then the risk one is concerned about is the risk of harm associated with the technique, there is no technological risk of harm associated with the choice between embryos.

29. King, supra note 4, at 383-87.

30. Some literature suggests that PGD and PGS should not be used except where parents are unable to conceive naturally.

31. For example, if the benefits of hearing are ten and the costs of the technological risks are two, then the actual benefit obtained by a technologically created hearing child is eight, not ten. The use of these numbers is not meant to imply that these things have readily determinable values; they do not. Rather, they are used for illustrative purposes.
dwarfism is a damaged good with limited life options.\textsuperscript{32} Her response, however, suggests that the open future approach may lead to conclusions which I did not intend. I found this particularly troublesome, since I agree with the vast majority of Professor Ouellette’s arguments.

Professor Ouellette fairly suggests that some of the language in my article was consistent with the medical model of disability.\textsuperscript{33} What Professor Ouellette’s commentary has forced me to see is that I made an important but unstated underlying assumption: that a large portion of the harm caused by a disabiling trait is due to environmental factors and that these environmental factors are not changing rapidly enough to alleviate harm caused by a disabiling trait. While some may view this assumption as pessimistic, and perhaps counterproductive,\textsuperscript{34} I think that it is, if nothing else, realistic. Here, I make some tentative arguments about how this assumption may reconcile an open future approach and a social model of disability.

I did not define “disability” in the original article because I feared that defining the term might inappropriately limit or expand parental tort liability. It seems to me that most, if not all, traits defined as disabilities under the Americans with Disabilities Act (“ADA”) should be considered legally cognizable injuries.\textsuperscript{35} But it also seems to me that other traits not defined as disabilities might limit a child’s future opportunities. Given these concerns, I thought that a case-by-case analysis might be more appropriate and consistent with current tort doctrine. Yet, to respond adequately to Professor Ouellette’s commentary, I now feel the need to adopt some definition of disability.

There are many varying definitions of disability in the literature even though the vast majority of academics espouse adherence to the social model of disability.\textsuperscript{36} In searching for a definition grounded in the

\textsuperscript{32} Ouellette, supra note 5, at 401.

\textsuperscript{33} See, e.g., Smolensky, supra note 1, at 309 (“[I]f parents purposefully produce a child with fewer capabilities, or less health, when they could produce a more healthful or capable child, there is a presumption of harm . . . .”). \textit{But see id. at 332} (describing the life of a young man who is deaf as “successful and fulfilling,” but noting that he might “have more opportunities available to him if he could hear”).

\textsuperscript{34} Some readers may think that my argument is counterproductive because it allows tort law to continue to factor in environmental harms as if they were acceptable. While this is a potential problem, I find that a strong version of the social model of disability seems uncaring because it sacrifices individual recovery for the purpose of serving some greater good—namely a societal change in perception of persons with disabilities.

\textsuperscript{35} 42 U.S.C. § 12102(2)(A) (2006) (defining disability as “a physical or mental impairment that substantially limits one or more of the major life activities of such individual”). The interpretation of the ADA is relatively narrow, and “in a series of ADA employment cases, courts have denied disability status to persons with epilepsy, myopia, monocular vision, and carpal tunnel syndrome.” Dov Fox, \textit{Silver Spoons and Golden Genes: Genetic Engineering and Egalitarian Ethos}, 33 Am J.L. & MED. 567, 610 (2007).

\textsuperscript{36} Adam M. Samaha, \textit{What Good Is the Social Model of Disability?}, 74 U. CHi. L. REV. 1251.
social model of disability, the definition that best captured my sentiment was offered by Professor Adam Samaha: "disability' [is] disadvantage caused by the confluence of two factors: (1) a person's physical or mental traits plus (2) the surrounding environment, which is at least partially constructed by others. Both factors might be necessary before disadvantage takes hold." I like this definition of disability because it recognizes that for disadvantage (or, in my terms, harm) to occur there must be both a particular trait and a particular environment.

Contrary to what the text of my original article may suggest in certain areas, I completely agree with Professor Ouellette that a large portion of the harm caused by a particular physical or mental trait is often due to environmental factors. I have no doubt that "a person with a physical impairment has the same inherent ability to lead a fulfilling life as does anyone else." I also agree that inaccurate societal stereotypes perpetuate unfair and inaccurate notions about persons with disabilities, and lead to the maintenance and creation of societal barriers. It is these societal barriers that account for a majority of the problems persons with disabilities face.

It is also true that in certain environments a trait like deafness confers no disadvantage, and may, in fact, confer some advantage. Perhaps growing up deaf in a deaf family is one of these situations.

But something else is also true: environmental factors are not changing rapidly enough to alleviate the harm caused by a trait such as deafness. Because of this unfortunate fact, children born today (and probably during the next several decades) will suffer disadvantage (harm) in society if they are born deaf. Therefore, it seems to me that where parents engage in direct genetic interventions to create a child who is deaf they have de facto harmed that child regardless of his or her familial circumstances.

In saying this I do not mean any insult. I am simply imagining a tort case in today's world, and trying to be realistic about the challenges that persons with disabilities still face as a result of socially constructed barriers.

1251 (2007).
37. Id.
38. See supra note 33 and accompanying text.
39. Ouellette, supra note 5, at 401. In fact, I note this in my article. Smolensky, supra note 1, at 332 (noting that the sixteen-year-old boy whose DNA was altered to make him deaf was "living a successful and fulfilling life").
40. I also recognize, as Professor Cohen points out, that "deafness... still prevent[s] access to goods made possible only by sound—enjoyment of a violin concerto by Tchaikovsky, for example." Cohen, supra note 3, at 350 n.8.
41. Thank you to Professor Ouellette for recognizing this. Ouellette, supra note 5, at 402.
This view is also consistent with current tort doctrine. Tort law compensates persons who become disabled as a result of another person's tortious conduct. In calculating damages, courts consider not just compensatory damages associated with "all losses that have proximately result from the tort," including pain and suffering, but lost earning capacity and "reasonable charges for diagnostic tests, drugs, medical devices and artificial limbs used." Many of these damages are created by the environment in which the person lives. For example, if society was better at integrating persons with disabilities into society, that person's long-term earning potential would not suffer.

Assume for the moment that an adult was made deaf by another's tortious conduct. His tort damages might include medical expenses, lost wages, lost earning potential, emotional distress, and pain and suffering. In a society without the "[a]rchitectural, attitudinal, sensory, political and economic barriers [that] prevent people with disabilities from full participation in society," his damages would be reduced. And we might even expect juries to consider evidence that the plaintiff's life has been enriched by his new disability. If the plaintiff's nonhearing life has benefits that outweigh the harm suffered as a result of socially constructed barriers, then perhaps those benefits should be weighed against the costs of injury, and the remedy severely limited.

Similarly, in the case of a newborn who is born deaf as a result of his parents' direct preimplantation genetic intervention, we might expect his tort damages to be limited. Pain from the injury would be absent (assuming physical pain in the adult's case is associated with the injury which caused the deafness), any cognitively perceived loss would not

42. Alternatively, tort law may inherently adopt a medical model of disability which treats disability as inherently tragic. To the extent that this is true, all tort doctrine needs to be substantially revised to fit within a social model of disability. To my knowledge, such sweeping reform of tort law has not been proposed. But see Wendy F. Hensel, The Disabling Impact of Wrongful Birth and Wrongful Life Actions, 40 HARV. C.R.-C.L. L. REV. 141, 144 (2005) (arguing that the "costs of recognizing wrongful life and birth actions are too high" because they promote a medical model of disability); cf. Creasy v. Rusk, 730 N.E.2d 659, 666-67 (Ind. 2000) (adopting the general view that a person with mental disabilities should be "held to the same standard of care as that of a reasonable person under the same circumstances without regard to the alleged tortfeasor's capacity to control or understand the consequences of his or her actions"). In Creasy, the Indiana Supreme Court noted that one rationale for holding persons with mental disabilities to the ordinary standard of care was a hope that they would be "integrat[ed] into the least restrictive environment." Id. at 666.

43. Dobbs, supra note 13, § 377.

44. Some readers might argue that this comparison is inaccurate because a person who is made deaf by the tortious actions of another has previously lived life as a hearing person. But, to me, the only difference is the severity of injury. A once-hearing plaintiff might be entitled to more damages because of his "perceivable physical pain or cognitively perceived loss" than a child who was born deaf, but the harmful societal barriers are present in both situations. Smolensky, supra note 1, at 335.

45. Ouellette, supra note 5, at 401.

46. One might argue that this will never happen because it is too risky a tactic for defense counsel to take. If this is the case, though, it supports my argument about the slow pace of attitudinal barriers.
exist, and the harms associated with societal barriers would disappear. In this world, direct genetic interventions that create a disabling trait might not be actionable because there would be no harm.

But, this is not the world that we live in. The societal barriers that persons with disabilities face are still enormous. Given that the eradication of these barriers is not imminent, I do not think it unreasonable to conclude that where parents intentionally create a child with a disability they have harmed that child regardless of any other mitigating factors.

III. THE HUMAN DIGNITY APPROACH

As an alternative to the open future approach that I suggest, Professor Ouellette offers a "disability-sensitive" approach that I will refer to as the human dignity approach. In describing the goals of her approach, Professor Ouellette writes:

The key to identifying cognizable injury without singling out disability as a uniquely tragic trait is to ask whether adding, deleting, or modifying an embryo's DNA to produce the parents' desired genotype is itself a legal wrong, instead of sorting among manufactured phenotypes to determine which constitute legally cognizable harms. In other words, focus on the intervention, not the result of the intervention."

I have two responses to her proposal. First, I think that the open future approach could be viewed as disability-sensitive. Second, even if it is not as sensitive as the human dignity approach, I believe that the human dignity approach can only be adopted under a particular set of restrictions.

A. THE OPEN FUTURE APPROACH AS A DISABILITY-SENSITIVE APPROACH

I think that the open future approach could be interpreted as adhering to the social model of disability. As noted above, it is not clear that recognizing a disability as a disadvantage (harm) falls outside the scope of the social model of disability given the great societal barriers present. It also seems to me that the open future approach focuses on the interventions and not the resulting disabling trait as harmful (although, perhaps not as elegantly or precisely as it should). This point is illustrated most clearly where I note that "[u]nder an objective standard of offense, the creation of genetic traits such as deafness or achondroplasia are almost certain to be considered offensive to a reasonable sense of personal dignity." Professor Ouellette cites this portion of my text and

47. Ouellette, supra note 5, at 407 (footnote omitted).
48. Smolensky, supra note 1, at 319-20. While I use examples of physical disabilities here, this statement is meant to apply to mental disabilities as well. It would, in my estimation, be just as accurate to say that most people would be offended if they were unconscious and another person
suggests that my analysis "singles out physical disability as 'offensive to a reasonable sense of personal dignity.'"⁴⁹ I think this language actually suggests a different conclusion.

This is an area where the language of tort law is not as precise as it could be. Yet, I would like to advance a few arguments for why "the creation of genetic traits such as deafness or achondroplasia," and not the condition itself, is "offensive to a reasonable sense of personal dignity."⁵⁰ First, the words "harmful" and "offensive" are adjectives, and therefore presumably meant to describe the type of contact and not the resulting harm or injury. Although tort doctrine does not parse out the language this carefully (most scholars discussing dual intent talk simply about the intent to harm as I did in several instances⁵¹), such a conclusion does not seem unreasonable. In fact, I think most tort scholars, if pressed, would agree that it is not the bruised ego or shattered skull that is offensive to a reasonable sense of personal dignity, but rather the touch that occasioned the bruised ego or shattered skull. This is why plaintiffs may get nominal damages for battery even if they do not suffer a physical injury.

B. The Human Dignity Approach Can Only Function Well with Certain Restrictions

Professor Ouellette proposes a human dignity approach where "the intentional manipulation of a child's DNA to create a trait chosen by a parent... is a harmful or offensive contact."⁵² Under her approach, "the manipulation causes moral harm, an injury to identity, and lost opportunities for the future child. It is of no moment that the contact with the child's DNA was intended to enhance the child."⁵³ The problem with this approach is that it makes parents liable for all preimplantation genetic modifications, regardless of whether the modification was therapeutic, enhancing, or diminishing.⁵⁴ This, I think, is problematic.

If technology improves, there may be very good reasons to allow parents to engage in direct genetic interventions to the same extent that we might allow parents to consent to certain medical procedures on behalf of their living children. With living children, the law allows

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⁴⁹. Ouellette, supra note 5, at 400 (quoting Smolensky, supra note 1, at 319-20).
⁵⁰. Smolensky, supra note 1, at 319-20 (emphasis added).
⁵¹. Id. at 320 (using phrases such as "with the intent of harming his or her later-born child" and "subjectively intends to harm their later-born child").
⁵². Ouellette, supra note 5, at 408.
⁵³. Id.
⁵⁴. This seems to be the stance taken by certain international documents, which call for a right to an unaltered genome. See, e.g., The Universal Declaration on the Human Genome and Human Rights. UNESCO, 29th Sess., 29 C/Res. 16 (Nov. 11, 1997), adopted by G.A. Res. 53/152, U.N. Doc A/RES/53/152 (Dec. 9, 1998).
parents to give consent to procedures that are therapeutic (for example, tonsillectomies, chemotherapy, or surgery to fix hip dysplasia). Sometimes, parents are even able to give consent to procedures that are enhancing (for example, cosmetic procedures such as ear tucks and braces to straighten teeth). But, to my knowledge, parents generally are not allowed to consent to medical procedures that might confer some serious disadvantage.

It is not clear to me, assuming that the technology is safe and effective, why preimplantation genetic interventions should be treated differently. If I am right about this, then I think current convention requires us to make choices about which genetic modifications are potentially harmful. Thanks to Professor Ouellette's comments I understand the need to be more explicit about the source of harm where a disabling trait is at issue. While I still feel that certain disabling traits may be de facto harms given current societal barriers, I am hopeful that discussions like this may persuade others to examine the intersection of tort law and disability rights.

IV. THE NON-IDENTITY PROBLEM REVISITED

Professor Cohen writes a fascinating two-part response. While much of what he says is quite interesting, I will focus solely on the first part in which he argues that "Smolensky's argument entails a broad extinguishing of tort liability, barring suit by the child against any person (parent, doctor, etc.) for any culpability based on any preimplantation act or omission that leads to diminishment." This conclusion is based on the idea that any person-affecting conception of harm necessarily raises the Non-Identity Problem in the preimplantation context, and that the Non-Identity Problem necessarily precludes tort liability. His arguments seem to focus on what it means for an entity's identity to persist through time. I respond to these claims by arguing that an identity does not need to persist through time for liability to attach. Indeed a particular entity need not even exist at the time of the injury-causing event for tort liability to lie.

In the original article, I argue that the Non-Identity Problem is irrelevant where parents engage in direct genetic interventions. Some of my initial thoughts for this conclusion center on the idea that any direct

56. See sources cited supra note 55.
57. Cohen, supra note 3, at 359.
58. See id. at 355–57.
59. Smolensky, supra note 1, at 331–36.
preimplantation genetic intervention "changes an already existing set of DNA and, arguably, changes the resulting person's identity." I pre-occupy myself, albeit briefly, with the relationship between genetics and identity.

Professor Cohen's response picks up on this line of inquiry and develops it significantly. He also considers several genetic modifications, for example, one which adds a Marilyn Monroe beauty mark to a later-born child, and one in a region of DNA which produces no phenotypic change. Ultimately, he concludes that it is too difficult to determine which genetic modifications are identity preserving and why. For the most part, I agree.

Professor Cohen also makes an argument that the preservation of personal identity requires either "psychological continuity through memory" or "a lesser requirement of continuity of 'conscious experiences.'" Since "one could [not] have conscious experiences before

60. Id. at 333.
61. Cohen, supra note 3, at 358. I am less certain than Professor Cohen that adding a beauty mark does not change one's identity. If beauty marks are readily associated with sex symbols (for example, Marilyn Monroe or Cindy Crawford), then having a beauty mark may change one's identity because it changes the way a person perceives herself and the way others perceive her. Of course, whether this is true is probably "unproveable and unfalsefiable." Id. at 359.
62. Id. at 358 n.34. I agree with Professor Cohen that this is a perfect example of a genetic modification that does not change personal identity.
63. Id. at 359. This may be particularly true given new scientific findings. For example, scientists have recently discovered that identical twins, which were once thought to have identical genomes, frequently possess a different number of copies of particular gene segments. C.E. Bruder et al., Phenotypically Concordant and Discordant Monozygotic Twins Display Different DNA Copy-Number-Variation Profiles, 82 AM. J. HUM. GENETICS 763 (2008); accord 'Identical' Twins? Not According to Their DNA: Minor Genetic Differences Help Explain Why Twins Aren't Exact Replicas, MSNBC, Feb. 21, 2008, http://www.msnbc.msn.com/id/23276953/ ("For instance, one twin might be missing a segment, or possess more copies of that segment than the other twin. Such variations could explain why one identical twin can suffer from a disorder while the other remains healthy."). Other phenotypic differences in monozygotic twins are attributable to epigenetic differences, for example the rate at which an embryo's DNA is demethylated. TOM STRACHAN & ANDREW P. READ, HUMAN MOLECULAR GENETICS 294-98, 469 (3d ed. 2004). Preimplantation Embryo Demethylation does not change the DNA sequence, just gene expression. Id. Yet, epigenetic differences can result in widely varying phenotypes. Id.
64. Cohen, supra note 3, at 355.
65. Id. at 356. Professor Cohen discusses at length what constitutes psychological continuity through memory. Id. at 355–58. To prove this point Professor Cohen writes:

Smolensky seems to also gesture, offhandedly, at a different kind of argument. In explaining her position she observes that "[w]hile deafening a hearing child may cause the child to have different life experiences, it does not create a different person." . . . [R]ejecting her position leaves us in a still more problematic position: it implies that there ought also to be no harm if we deafened an adult . . . because that would create a new identity who could only exist because the old identity ceased to be. That conclusion is absurd . . .

Id. at 355 (quoting Smolensky, supra note 1, at 334) (footnote omitted). Cohen further writes, "[O]ne might argue that the intervention in the adult case is identity preserving, but because of a different basis for the continuity of identity, for present purposes let us call it psychological continuity through memory." Id.
one had even a primitive nervous system, there does not seem to be this kind of continuity between one's adult self and one's pre-embryonic self.\textsuperscript{66} Based on this line of reasoning, he argues that the identity of the pre-embryo (if it can even be said to have an identity)\textsuperscript{67} does not persist into childhood, and therefore, a later-born child cannot be said to have been harmed by something that happened to it as a pre-embryo. While both lines of inquiry are interesting, neither seems to preclude tort liability.

The questions of which genetic manipulations are identity preserving and whether the preservation of personal identity requires psychological continuity or something slightly less are questions that focus on the persistence problem. The persistence problem asks, "What does it take for a person to persist from one time to another—that is, for the same person to exist at different times?\textsuperscript{68} In other words, is the pre-embryonic entity that undergoes a genetic alteration the same person (or does it share the same personal identity) as the resulting later-born child? Assume, for the sake of argument, that the answer is no.\textsuperscript{69} This conclusion does not preclude liability. One might also argue that liability is not available for the later-born child because it is not a person at the time of the genetic alteration. This concern also does not preclude tort liability.

[T]ort law does not generally distinguish between harms caused after birth, prenatally or prior to conception for purposes of stating a cause of action. As long as the alleged negligent action causes a born-alive child to suffer a legally cognizable harm, a tort injury will be recognized even if the injury was suffered prior to the achievement of legal personhood.\textsuperscript{70}

Born-alive children have been allowed to pursue a wide variety of prenatal negligence claims, even where the alleged negligent act happened prior to the development of a primitive nervous system.\textsuperscript{71} In

\textsuperscript{66} Id. at 357.

\textsuperscript{67} Id. at 357 n.32 (suggesting that the pre-embryo cannot have an identity that persists because it is not a person).


\textsuperscript{69} There are some views that would allow an affirmative answer.

\textsuperscript{70} Smolensky, supra note 1, at 335 (footnotes omitted).

\textsuperscript{71} Id. at 324; see also Snyder v. Michael's Stores, Inc., 945 P.2d 781, 791 (Cal. 1997) (holding that a born-alive child could sue for injuries incurred when child's mother inhaled toxic fumes on the job while pregnant); Bailey v. Khoury, 891 So.2d 1268, 1281 (La. 2005) (holding that an infant had a cause of action against a physician who prescribed medication to its mother but failed to warn her of the risks of becoming pregnant while taking the drug); Payton v. Abbott Labs, 437 N.E.2d 171, 190 (Mass. 1982) (holding that women who were harmed because their mothers took diethylstilbestrol (DES) while pregnant could maintain a cause of action); Seattle-First Nat'l Bank v. Rankin, 367 P.2d 835, 837-38 (Wash. 1962) (holding that an infant had a cause of action against its mother's physician when he failed to diagnose and medicate the mother for anemia during pregnancy, a condition that ultimately harmed the fetus).
some jurisdictions, later-born children have even been allowed to pursue claims for harm resulting from preconception negligence. Some of these cases involve genetic changes.

Requiring psychological continuity in tort law would bar all preconception tort claims and all prenatal tort claims prior to "the last two or three months of a normal pregnancy, when neural activity, which is associated with rudimentary subjective experience, first occurs in a fetus's brain." Psychological continuity might also bar the tort claims of severely mentally disabled persons or persons with Alzheimer's disease. If psychological continuity were always required in tort law, I fear that many meritorious tort cases might be barred. This, I think, is unacceptable.

The persistence question is also distinct from the Non-Identity Problem. The Non-Identity Problem asks, "If someone lives a life that is 'worth living, is this worse for this person than if he had never existed?"

In wrongful life cases, the Non-Identity Problem is powerful because the defendant's negligent actions result in the birth of a child who otherwise would not have existed. In other words, "embryonic genetic modification does not involve a choice between living a differently-abled (or disabled) life and nonexistence," as you might see in wrongful life cases; "it is the choice between living a differently-abled life and living a life absent genetic modification (... presumably one without a disability)."

To frame the issue a slightly different way: in direct preimplantation genetic interventions, as in many preconception tort cases, the claim is not that "the negligence of the defendant causes the conception or birth of a child who happens to be disabled," but that "the negligence of the defendant causes the disability itself." In direct preimplantation genetic intervention the parents are engaging in an act that not only causes, but...
intentionally creates the disabling trait. Absent the parents' direct genetic intervention, this particular embryo (if implanted) would live a life without the disabling trait.

This last sentence may give some readers pause. What if parents refuse to implant a pre-embryo unless they can genetically modify it to create a later-born child who is deaf? Perhaps this parental preference (and indeed the mother's procreative liberty interest in not becoming pregnant with the unaltered embryo) in combination with the parents' direct genetic intervention results in the birth of a child who has a life worth living and who otherwise would not have existed. Does this fact situation recreate the Non-Identity Problem?

While I think much thought and careful explanation needs to go into an adequate response, I would like to provide a very tentative answer here. Even if this fact situation recreates the Non-Identity Problem, which I am not sure it does, parents should not be allowed to escape liability because they created the situation of their own volition. Just as voluntary imbibing does not reduce the standard of care owed, parental preferences should not create a situation which relieves parents of their duty of care.

CONCLUSION

Reviewing the comments of Professors Cohen, King, and Ouellette, and writing this reply has been an extraordinarily rewarding process. I hope this reply clarifies and refines some of my original points, and adds some additional insights into the possibility of parental tort liability for direct preimplantation genetic interventions.

Even after considering all of the thoughtful commentaries, I still believe that parental tort liability should be possible where parents intentionally engage in direct genetic interventions designed to create a

78. On this point, Professor Cohen writes:

Suppose the deaf parents say they will only conceive a child if it can be deaf (using either selection or genetic modification). In such a case, although the parents could have conceived a hearing child instead (and thus their decision not to do so was wrongful according to the non-person-affecting principle), if the legal rule prevents them from intentionally creating a deaf child, that rule will lead them not to have any child at all, which is not better on non-person-affecting grounds.

Cohen, supra note 3, at 362.

79. RESTATEMENT (THIRD) OF TORTS: LIABILITY FOR PHYSICAL HARM §12 cmt. c (2001). As the Restatement (Third) of Torts states:

In a rare case, a person might be the victim of involuntary intoxication: the iced tea the person is drinking may have been spiked with liquor. If the person's resulting intoxication helps explain substandard conduct, this intoxication is taken into account in determining whether the actor has behaved as a reasonably careful person. Ordinarily, however, intoxication is essentially voluntary in nature. . . . When a person's intoxication is voluntary, it is not considered as an excuse for the person's conduct that is otherwise lacking in reasonable care.

Id.
child with a disabling trait. While regulation or provider liability may provide other, perhaps even better, avenues for curbing bad parental acts, parental tort liability will still be an issue absent some ruling or statute explicitly prohibiting it.

One reason for allowing tort liability in these instances is that the later-born child has been de facto harmed. While there may be numerous benefits to growing up with a disabling trait, such as deafness, the environmental barriers that create disadvantage in today's society are still great. This means that a child born with a disabling trait may have his future limited in unfortunate ways. The open future approach acknowledges that the harm is not the disabling trait itself, but living in a society that limits future options for persons with certain disabling traits. Therefore, I tentatively argue in this reply that the open future approach applies the social model of disability.

I also continue to maintain that the Non-Identity Problem does not prohibit tort liability in this subset of cases. Tort law does not require the persistence of personal identity for later-born child to suffer harm. Indeed, a particular entity need not even exist at the time of the injury-causing event for there to be tort liability. Furthermore, direct preimplantation genetic interventions are more similar to preconception tort cases than to wrongful life suits. Direct preimplantation genetic interventions (like preconception torts and some prenatal torts) involve actions that cause the disabling trait, whereas wrongful life suits involve actions that result in the conception and birth of a child who happens to be disabled. The original article only proposes liability where parents intentionally cause (indeed, create) the disabling trait. While there is certainly more to be written on this point, as I suggest above, for now I believe that parental tort liability is a real possibility under current tort doctrine.

There is also the question of measuring harm. Certain fact scenarios—for example, where parents could conceive naturally and yet choose ART because they wish to create a child with a disability—may pose additional harms to later-born children. But in many instances the risk of technological harm is not particularly helpful when comparing the relative harms and benefits of particular preimplantation genetic modifications. In any event, if technological harm befalls a child in addition to the harm created by the disabling trait, I believe the child should be compensated for both harms.

Finally, I should mention that Professors Ouellette and Cohen suggest various other theories of parental tort liability in their commentaries. While I was not able to examine the majority of them here, I do tend to think that tort doctrine in most, but not necessarily all instances, will require a person-affecting conception of harm. Nonetheless, I am hopeful that some readers may take up some of these
theories and study them more carefully. I am very interested to see how the literature develops in the area, and I look forward to reading more on the topic.